Utah Influenza Report

This report contains data through the week ending03/09/2013 (MMWR week 10).

UTAH DEPARTMENT OF HEALTH
Communicable Disease Analysis & Reporting Program

Overview of Influenza Surveillance: Surveillance for the 2012-2013 influenza season officially began on September 30, 2012. The Utah Department of Health publishes a weekly report throughout the active influenza season that synthesizes data from a variety of sources to give the most complete and up-to-date picture of influenza activity in the state of Utah. Data in this report should be considered provisional, and may change as more complete reports are recieved.

Influenza-like Illness (ILI): The U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet) is a national system that conducts surveillance for influenza-like illness (ILI) in outpatient healthcare facilities. ILINet providers report weekly the total number of patients seen for any reason and the number of patients seen with ILI (defined as a fever ≥ 100° F and a cough or sore throat). These data are used to determine the amount of ILI circulating in the community, as well as provide insight into regional differences in ILI activity. Currently, more than 50 facilities throughout Utah participate in ILINet.

Figure 1. Weekly Influenza-like Illness Activity
Influenza-like illness (ILI) activity as measured by the number of standard deviations from the epidemic threshold - Utah, 2012-2013

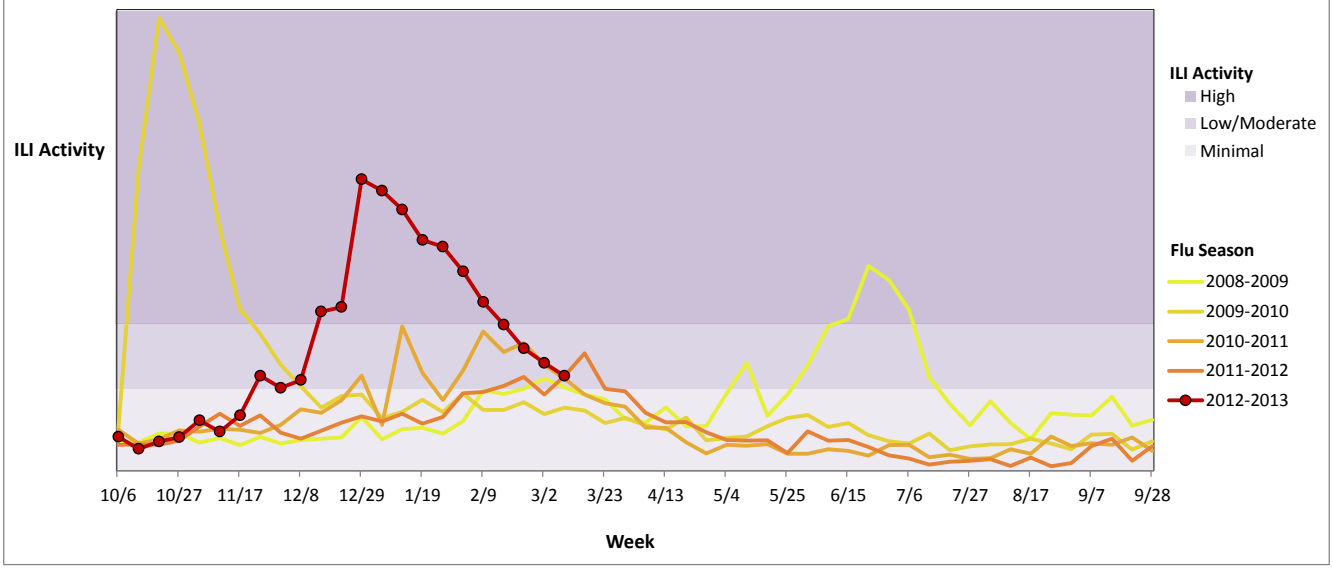

Table 1. Influenza-like Illness (ILI) Activity Levels by Health District - Utah, Current Week

Health District	ILI Activity
Bear River	Minimal
Central	Minimal
Davis	Low/Moderate
Salt Lake	Low/Moderate
Southeastern	No Data
Southwest	Minimal
Summit	Minimal
Tooele	Minimal
TriCounty	No Data
Utah	Low/Moderate
Wasatch	Minimal
Weber-Morgan	Minimal
State	**Low/Moderate**

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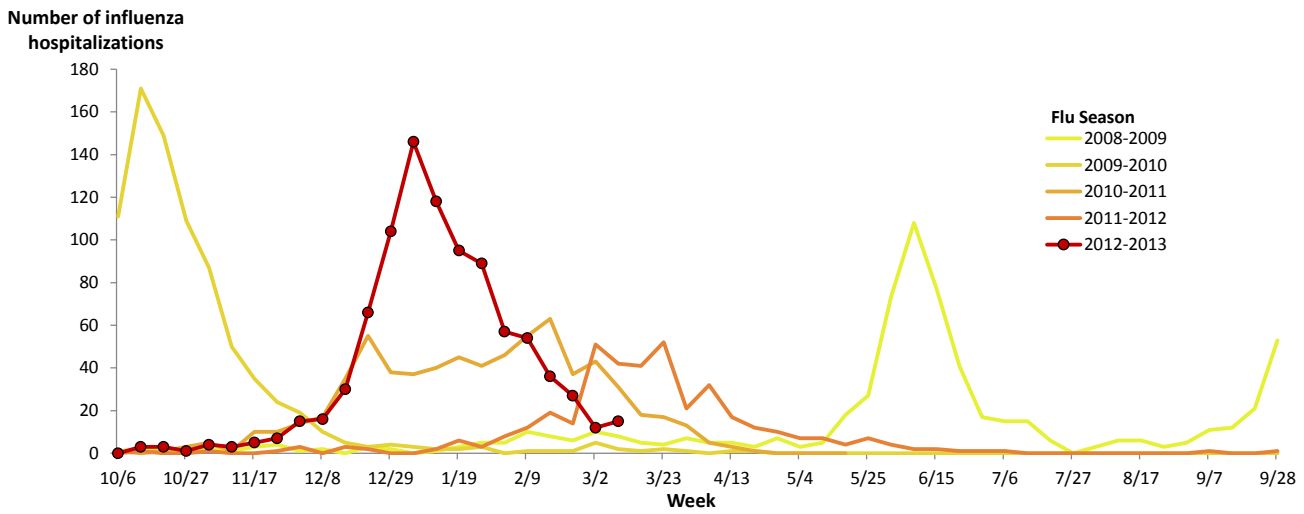
Influenza Hospitalizations: Influenza hospitalizations are a reportable condition in Utah. A person meets the case definition for an influenza hospitalization if they are hospitalized for any length of time and have an influenza positive serology, DFA, PCR, or culture test (confirmed case) or a positive rapid influenza diagnostic test (probable case). Public health in Utah gathers a variety of data on influenza hospitalizations including clinical features, course of illness, risk and protective factors, and influenza type and subtype. Data from influenza hospitalizations allows public health in Utah to better understand subgroups of the Utah population that are most severely effected by influenza and help to guide prevention messages and interventions.

Figure 2. Influenza Hospitalizations
Number of influenza hospitalizations by event date* - Utah, 2012-2013



*Event date is calculated based on a hierarchy of dates: 1. onset date 2. specimen collection date 3. date reported to public health.

Table 2. Influenza Hospitalizations by Case Status - Utah

	Current Week		Season To Date	
Case Status	**Total**	**% of Cases**	**Total**	**% of Cases**
Confirmed	15	100.0	852	94.0
Probable	0	0.0	54	6.0
Total	**15**	**100.0**	**906**	**100.0**

Table 3. Influenza Hospitalizations by Health District - Utah

Health District	Current Week	Season To Date
Bear River	0	44
Central	1	38
Davis	0	70
Salt Lake	7	408
Southeastern	0	3
Southwest	2	98
Summit	0	14
Tooele	0	4
TriCounty	0	14
Utah	2	141
Wasatch	1	4
Weber-Morgan	2	68
State	**15**	**906**

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Table 4. Influenza Hospitalizations by Age Group - Utah, Season To Date

Age Group	Total Cases	% of Cases	Rate*
0-4	184	20.3	67.99
5-24	121	13.4	12.79
25-49	115	12.7	11.59
50-64	125	13.8	31.21
65+	361	39.8	146.16
Total	**906**	**100.0**	**31.72**

*Rate is calculated as the number of cases per 100,000 population

Table 5. Influenza Hospitalizations by Sex and Race - Utah, Season To Date

Variable		Num. of Cases	% of Cases	% in Utah Pop	p value*
Sex	Male	440	48.6	50.3	0.2957
	Female	466	51.4	49.7	0.2957
	Unknown	0	0.0	NA	--
Race	White, Not Hispanic	735	81.1	82.0	0.4739
	Hispanic	108	11.9	11.6	0.7539
	Native Hawaiian/Pacific Islander	31	3.4	0.7	<0.0001
	Black/African American	11	1.2	0.9	0.3783
	American Indian	2	0.2	1.1	0.0095
	Asian	19	2.1	1.9	0.6121
	Unknown	0	0.0	NA	--

*If a p value is ≤ 0.05, there is a significant difference between the percentage seen in influenza hospitalizations and the general Utah population.

Table 6. Summary Data for Influenza Hospitalizations - Utah, Season To Date

	Yes		No		Unknown	
Variable	Total	% of Cases	Total	% of Cases	Total	% of Cases
ICU	130	14.3	686	75.7	90	9.9
Ventilator	51	5.6	768	84.8	87	9.6
Died	32	3.5	781	86.2	93	10.3
Neurological Symptoms	100	11.0	709	78.3	97	10.7
Healthcare Worker	7	0.8	511	56.4	388	42.8
Pregnant	29	3.2	817	90.2	60	6.6
Heart Disorder	273	30.1	543	59.9	90	9.9
Blood Disorder	19	2.1	794	87.6	93	10.3
Kidney Disorder	81	8.9	732	80.8	93	10.3
Metabolic Disorder	219	24.2	597	65.9	90	9.9
Chronic Respiratory Disorder	259	28.6	559	61.7	88	9.7
Immunosuppressed	86	9.5	725	80.0	95	10.5
Neurological Disorder	100	11.0	709	78.3	97	10.7
Seizure Disorder	29	3.2	786	86.8	91	10.0
Bacterial Co-infection	13	1.4	799	88.2	94	10.4
Obese*	115	19.2	194	32.4	290	48.4
Morbidly Obese*	23	3.8	286	47.7	290	48.4
Risk Factor†	830	91.6	76	8.4	0	0.0
Vaccinated	282	31.1	349	38.5	275	30.4

*Obesity and morbid obesity is not considered for individuals under 18 years or pregnant women. Thus total counts will not equal the total number of influenza-associated hospitalizations

†Risk factors for influenza include: persons < 5 years, persons ≥ 65 years, pregnant women, and persons with a chronic medical condition.

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Student Absenteeism: School-age children are at high risk for respiratory virus infections, including influenza. Aggregate, all-cause absenteeism data is collected weekly from over 350 schools throughout Utah. These data are analyzed to identify elevated absenteeism rates that could indicate the circulation of influenza in school-age children.

Figure 3. Student Absenteeism by Week

Rates for absences due to all causes - Utah, 2011-2012 and previous 3 year average

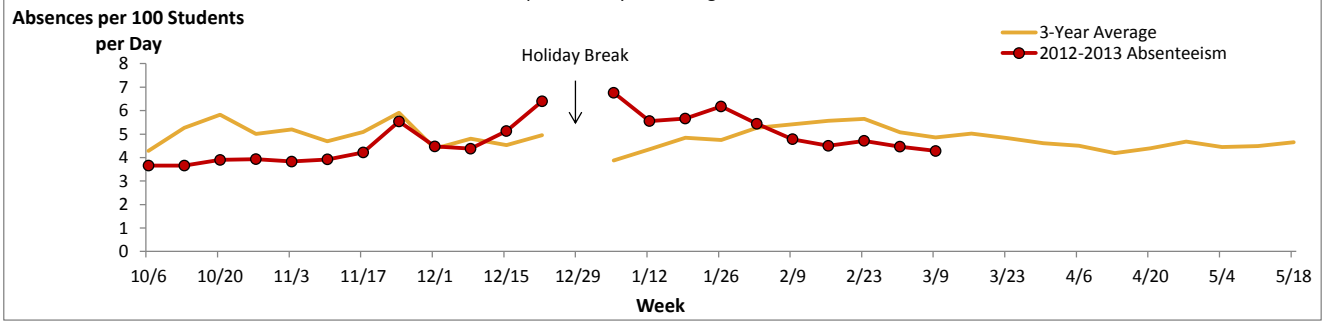


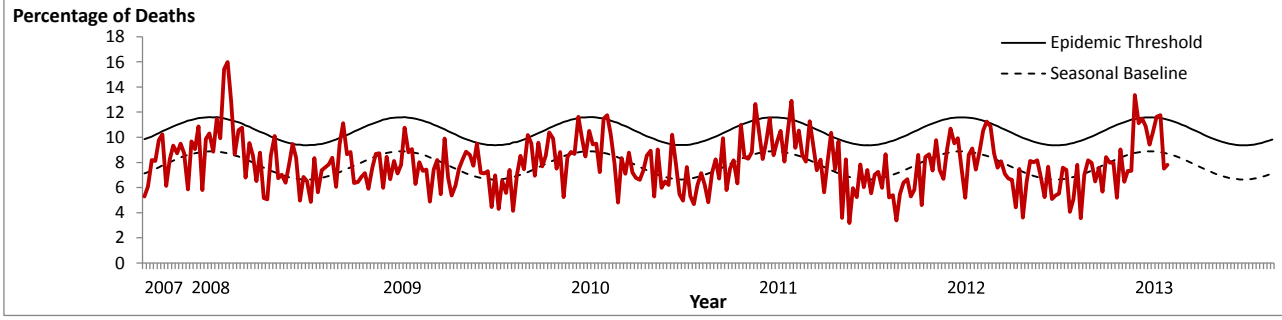
Table 7. Weekly Student Absenteeism - Utah, Current Week

Health District	Absences per 100 students/day
Bear River	3.2
Central	5.5
Davis	4.2
Salt Lake	4.0
Southeast	5.6
Southwest	5.0
Summit	3.8
Tooele	5.3
TriCounty	4.9
Utah	1.9
Wasatch	3.9
Weber-Morgan	5.0
State	**4.3**

Pneumonia and Influenza Deaths: Each week the total number of death certificates received and the number of those for which pneumonia or influenza was listed as an underlying or contributing cause of death is collected. The percentage of deaths due to pneumonia and influenza are compared with a seasonal baseline and epidemic threshold value calculated for each week. These data are used to monitor the severity of influenza illness in the community.

Figure 4. Pneumonia and Influenza Deaths

Percentage of deaths attributable to pneumonia and influenza by week of death - Utah, 2007-2013



http://health.utah.gov/flu ● 801-538-6191 ● epi@utah.gov

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Laboratory Surveillance: The Unified State Laboratory: Public Health recieves specimens from all over the state for comprehensive influenza testing. All specimens are tested to determine influenza type and subtype. A portion of specimens are also sent to the Centers for Disease Control and Prevention for addtional testing, including gene sequencing, antiviral resistance testing and antigenic characterization.

Figure 5. Influenza Positive Tests

Influenza positive specimens tested by Unified State Laboratory: Public Health - Utah, 2012-2013

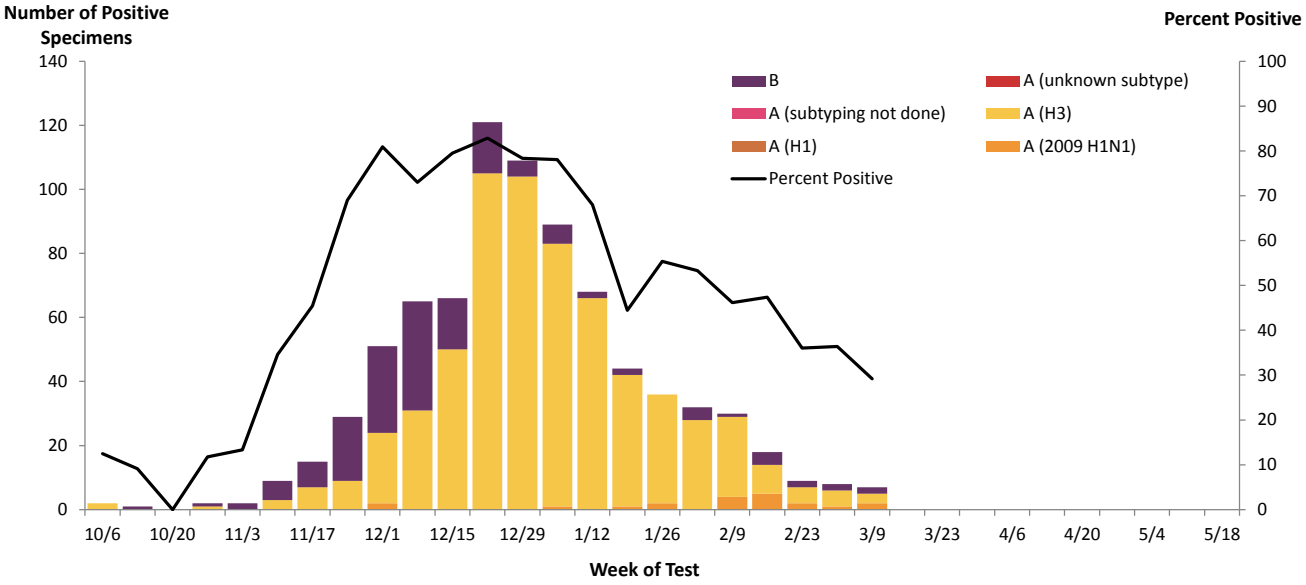

Table 8. Unified State Laboratory: Public Health Influenza Testing Data

	Current Week		Season To Date	
	Total	**Percent**	**Total**	**Percent**
Specimens tested	24	--	1,301	--
Positive specimens	7	29.2	813	62.5
Positive Specimens by Type/Subtype				
Influenza A	5	71.4	652	80.2
A (2009 H1N1)	2	40.0	20	3.1
A (H1)	0	0.0	0	0.0
A (H3)	3	60.0	632	96.9
A (subtyping not performed)	0	0.0	0	0.0
A (unable to subtype)	0	0.0	0	0.0
Influenza B	2	28.6	161	19.8

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